

110TH CONGRESS  
1ST SESSION

# S. 1297

To amend the Clean Air Act to promote the use of advanced clean fuels that help reduce air and water pollution and protect the environment.

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IN THE SENATE OF THE UNITED STATES

MAY 3, 2007

Mrs. BOXER (for herself, Ms. COLLINS, and Mr. LIEBERMAN) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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## A BILL

To amend the Clean Air Act to promote the use of advanced clean fuels that help reduce air and water pollution and protect the environment.

1       *Be it enacted by the Senate and House of Representa-*  
2       *tives of the United States of America in Congress assembled,*

3       **SECTION 1. SHORT TITLE.**

4       This Act may be cited as the “Advanced Clean Fuels  
5       Act of 2007”.

6       **SEC. 2. FINDINGS.**

7       Congress finds that—

8               (1) oil used for transportation contributes sig-  
9       nificantly to air pollution, including global warming

1 pollution, water pollution, and other adverse impacts  
2 on the environment;

3 (2) to reduce dangerous air and water pollution  
4 and other adverse environmental impacts, the United  
5 States should increasingly rely on advanced clean  
6 fuels for transportation;

7 (3) fuels vary considerably with respect to—

8 (A) the potential impact of the fuels on air  
9 and water pollution based on the type and  
10 quantity of pollutants that result from the pro-  
11 duction, distribution, and use of the fuel; and

12 (B) the potential impact of the fuels on  
13 other aspects of the environment, including soil  
14 quality, land conservation, wildlife habitat, and  
15 water scarcity; and

16 (4) it is urgent, necessary, and feasible to in-  
17 crease the proportion of clean renewable fuels in the  
18 United States transportation fuel supply in a man-  
19 ner that—

20 (A) promotes environmental protection;

21 (B) avoids environmental harm; and

22 (C) is economically efficient.

23 **SEC. 3. DEFINITIONS.**

24 Section 211(o)(1) of the Clean Air Act (42 U.S.C.  
25 7545(o)(1)) is amended—

(1) by redesignating subparagraphs (A) through (D) as subparagraphs (C), (P), (L), and (M), respectively;

(2) by inserting before subparagraph (C) (as redesignated by paragraph (1)) the following:

“(A) ACADEMY.—The term ‘Academy’ means the National Academy of Sciences.

“(B) ADVERSE LIFECYCLE IMPACT.—The term ‘adverse lifecycle impact’ means, with respect to increases in the volume of renewable fuel sold or dispensed to consumers in the United States for a calendar year, that the increases, as determined by the Administrator, would reasonably be anticipated—

“(i) to result in an inconsistency or material interference with the implementation of or compliance with any Federal environmental law (including a regulation);

“(ii) to result in a material increase in—

“(I) air pollution, including global warming pollution;

“(II) water pollution; or

“(III) human exposure to pesticides;

1 “(iii) to result in a substantial in-  
 2 crease in deforestation on a global or na-  
 3 tional scale;

4 “(iv) to result in a substantial adverse  
 5 effect on land conservation and wildlife  
 6 habitat;

7 “(v) to result in any other substantial  
 8 adverse effect on the environment;

9 “(vi) to result in a substantial adverse  
 10 effect on food or feed production or prices,  
 11 as determined in consultation with the Sec-  
 12 retary of Agriculture;

13 “(vii) to result in a substantial ad-  
 14 verse effect on long-term agricultural pro-  
 15 ductivity, including effects on soils and  
 16 water resources, as determined in consulta-  
 17 tion with the Secretary of Agriculture; or

18 “(viii) not to increase the supply of  
 19 clean, domestic energy;”;

20 (3) in subparagraph (C) (as redesignated by  
 21 paragraph (1)), by striking clause (viii) and insert-  
 22 ing the following:

23 “(viii) separated food waste, yard  
 24 waste, and lawn debris recovered from mu-  
 25 nicipal solid waste.”;

(4) by inserting after subparagraph (C) (as redesignated by paragraph (1)) the following:

“(D) CONVENTIONAL TRANSPORTATION FUEL.—The term ‘conventional transportation fuel’ means any fossil-fuel-based transportation fuel used in the United States as of the date of enactment of the Advanced Clean Fuels Act of 2007.

“(E) ECOSYSTEM CONVERSION.—The term ‘ecosystem conversion’ means an alteration of an ecologically significant native habitat (including modification of hydrology and dominant vegetative and other species) to an extent at which the native habitat no longer supports most dominant native species or ecological processes.

“(F) FIREWISE ZONE.—The term ‘firewise zone’ means the immediate vicinity of a building or other area regularly occupied by individuals, or any public infrastructure, that is at risk of wildfire.

“(G) FUEL EMISSION BASELINE.—The term ‘fuel emission baseline’ means the average lifecycle greenhouse gas emissions per unit of energy of the fossil fuel component of conven-

1 tional transportation fuels in commerce in the  
 2 United States in calendar year 2008, as deter-  
 3 mined by the Administrator under paragraph  
 4 (11).

5 “(H) FUEL PROVIDER.—

6 “(i) IN GENERAL.—The term ‘fuel  
 7 provider’ means an obligated party (as de-  
 8 scribed in section 80.1106 of title 40, Code  
 9 of Federal Regulations (or a successor reg-  
 10 ulation)).

11 “(ii) INCLUSIONS.—The term ‘fuel  
 12 provider’ includes, as the Administrator  
 13 determines to be appropriate, an individual  
 14 or entity that produces, blends, or imports  
 15 gasoline or any other transportation fuel in  
 16 commerce in, or into, the United States.

17 “(I) GREENHOUSE GAS.—The term ‘green-  
 18 house gas’ means any of—

19 “(i) carbon dioxide;

20 “(ii) methane;

21 “(iii) nitrous oxide;

22 “(iv) hydrofluorocarbons;

23 “(v) perfluorocarbons; and

24 “(vi) sulfur hexafluoride.

1           “(J) LIFECYCLE GREENHOUSE GAS EMIS-  
 2           SIONS.—The term ‘lifecycle greenhouse gas  
 3           emissions’ means, with respect to a transpor-  
 4           tation fuel, the aggregate quantity of green-  
 5           house gases emitted, directly or indirectly, dur-  
 6           ing production, feedstock production or extrac-  
 7           tion, distribution, marketing, and use of the  
 8           transportation fuel, or waste disposal relating  
 9           to the transportation fuel, as determined by the  
 10          Administrator under paragraph (11)(B).

11          “(K) NATIVE HABITAT.—

12           “(i) IN GENERAL.—The term ‘native  
 13           habitat’ means dynamic groupings of na-  
 14           tive plant and animal communities that—

15                   “(I) occur together on a land-  
 16                   scape or in water; and

17                   “(II) are connected through—

18                           “(aa) similar ecological proc-  
 19                           esses;

20                           “(bb) underlying environ-  
 21                           mental features, such as geology;  
 22                           or

23                           “(cc) environmental gra-  
 24                           dients, such as elevation.

1 “(ii) EXCLUSION.—The term ‘native  
 2 habitat’ does not include land that is or  
 3 has been under agricultural production.”;

4 (5) in clause (i) of subparagraph (L) (as reded-  
 5 icated by paragraph (1)), by striking “The term”  
 6 and inserting “Except as otherwise provided in this  
 7 subsection, the term”;

8 (6) by inserting after subparagraph (M) (as re-  
 9 designated by paragraph (1)) the following:

10 “(N) TECHNICALLY INFEASIBLE.—The  
 11 term ‘technically infeasible’, with respect to  
 12 compliance with a standard or requirement  
 13 under this subsection, means that adequate  
 14 technology or infrastructure is not reasonably  
 15 anticipated to exist within a sufficient time to  
 16 permit compliance with the standard or require-  
 17 ment.

18 “(O) TRANSPORTATION FUEL.—The term  
 19 ‘transportation fuel’ means fuel used to power  
 20 motor vehicles, nonroad engines, or aircraft.”.

21 **SEC. 4. ADVANCED CLEAN FUEL PROGRAM.**

22 (a) ADVANCED CLEAN FUEL PERFORMANCE STAND-  
 23 ARD.—Section 211(o) of the Clean Air Act (42 U.S.C.  
 24 7545(o)) is amended by adding at the end the following:

1           “(11) ADVANCED CLEAN FUEL PERFORMANCE  
2       STANDARD.—

3           “(A) DEFINITIONS.—In this paragraph:

4           “(i) NATIONAL INTEREST LAND.—

5       The term ‘national interest land’ includes  
6       land that is within the National Wildlife  
7       Refuge System, the National Park System,  
8       a National Monument, the National Wil-  
9       derness Preservation System, the National  
10      Landscape Conservation System, or the  
11      National Forest System, that is Bureau of  
12      Land Management land protected by stat-  
13      ute, proclamation, or regulation from com-  
14      mercial timber activities, or that is endan-  
15      gered or threatened species habitat, an old-  
16      growth forest, or an inventoried roadless  
17      area.

18          “(ii) PHASE II RENEWABLE FUEL.—

19      The term ‘phase II renewable fuel’ means  
20      renewable fuel the lifecycle greenhouse gas  
21      emissions of which are 50 percent to 74  
22      percent lower than the fuel emission base-  
23      line.

24          “(iii) PHASE III RENEWABLE FUEL.—

25      The term ‘phase III renewable fuel’ means

renewable fuel the lifecycle greenhouse gas emissions of which are at least 75 percent lower than the fuel emission baseline.

“(iv) RENEWABLE BIOMASS.—

“(I) IN GENERAL.—The term ‘renewable biomass’ means any organic matter that is available on a renewable or recurring basis.

“(II) INCLUSIONS.—The term ‘renewable biomass’ includes—

“(aa) renewable plant material, including—

“(AA) feed grains;

“(BB) other agricultural commodities;

“(CC) other plants and trees grown for energy production; and

“(DD) algae; and

“(bb) waste material, including—

“(AA) crop residue;

“(BB) other vegetative waste material (including

1 wood waste and wood resi-  
2 dues);

3 “(CC) animal waste  
4 and byproducts (including  
5 fats, oils, greases, and ma-  
6 nure); and

7 “(DD) separated food  
8 waste, yard waste, and lawn  
9 debris recovered from mu-  
10 nicipal solid waste.

11 “(III) EXCLUSIONS.—The term  
12 ‘renewable biomass’ does not include  
13 biomass derived from—

14 “(aa) land on which eco-  
15 system conversion has occurred  
16 after the date of enactment of  
17 the Advanced Clean Fuels Act of  
18 2007, as determined by the Ad-  
19 ministrator;

20 “(bb) land enrolled in the  
21 conservation reserve program es-  
22 tablished under subchapter B of  
23 chapter 1 of subtitle D of title  
24 XII of the Food Security Act of  
25 1985 (16 U.S.C. 3831 et seq.) or

1 the wetlands reserve program es-  
2 tablished under subchapter C of  
3 chapter 1 of subtitle D of title  
4 XII of the Food Security Act of  
5 1985 (16 U.S.C. 3837 et seq.),  
6 unless the biomass is produced in  
7 a manner consistent with all ap-  
8 plicable guidelines, and terms  
9 and conditions of any applicable  
10 contract, under the program;

11 “(cc) any national interest  
12 land (other than land in a  
13 firewise zone), except for harvest  
14 residue, mill waste, or pre-com-  
15 mercial thinnings derived from  
16 national interest land assigned to  
17 timber production;

18 “(dd) recyclable postcon-  
19 sumer waste paper;

20 “(ee) painted, treated, or  
21 pressurized wood;

22 “(ff) wood contaminated  
23 with plastic or metals; or

24 “(gg) any material pro-  
25 duced, harvested, acquired, trans-

ported, or processed pursuant to  
an exemption from otherwise ap-  
plicable Federal environmental  
laws (including regulations).

“(v) RENEWABLE FUEL.—

“(I) IN GENERAL.—The term ‘re-  
newable fuel’ means transportation  
fuel that is not an ether and that—

“(aa)(AA) is produced from  
renewable biomass; or

“(BB) is natural gas pro-  
duced from a biogas source, in-  
cluding a landfill, sewage waste  
treatment plant, feedlot, or other  
place where decaying organic ma-  
terial is found;

“(bb) is used to replace or  
reduce the quantity of fossil fuel  
present in a fuel mixture used for  
transportation; and

“(cc) has lifecycle green-  
house gas emissions that are at  
least 20 percent lower than the  
fuel emission baseline.

1 “(II) INCLUSION.—The term ‘re-  
 2 newable fuel’ includes fuel meeting the  
 3 criteria in subclause (I) that is—

4 “(aa) cellulosic biomass eth-  
 5 anol and waste derived ethanol;

6 “(bb) biodiesel (as defined in  
 7 section 312(f) of the Energy Pol-  
 8 icy Act of 1992 (42 U.S.C.  
 9 13220(f))) and any blending  
 10 components derived from renew-  
 11 able fuel (provided that only the  
 12 renewable fuel portion of any  
 13 such blending component shall be  
 14 considered part of the applicable  
 15 volume under the renewable fuel  
 16 program established by this sub-  
 17 section); or

18 “(cc) fuel produced from py-  
 19 rolysis or thermal conversion of  
 20 renewable biomass.

21 “(B) STANDARD.—

22 “(i) IN GENERAL.—Not later than  
 23 January 1, 2010, the Administrator shall,  
 24 by regulation—

1 “(I) establish a methodology for  
2 use in determining the lifecycle green-  
3 house gas emissions of transportation  
4 fuel in commerce, including—

5 “(aa) conventional transpor-  
6 tation fuel; and

7 “(bb) renewable fuel;

8 “(II) determine the fuel emission  
9 baseline;

10 “(III) establish a transportation  
11 fuel certification and marketing proc-  
12 ess—

13 “(aa) to certify fuels that  
14 qualify as renewable fuel under  
15 this paragraph;

16 “(bb) to determine the  
17 lifecycle greenhouse gas emis-  
18 sions of conventional transpor-  
19 tation fuels and renewable fuels  
20 being sold or introduced into  
21 commerce in the United States;  
22 and

23 “(cc) to label and market  
24 conventional transportation fuel

1 and renewable fuel in a manner  
2 that indicates—

3 “(AA) the status of the  
4 fuel as conventional trans-  
5 portation fuel or renewable  
6 fuel; and

7 “(BB) the lifecycle  
8 greenhouse gas emissions of  
9 the fuel; and

10 “(IV) in accordance with clause  
11 (ii), establish a requirement applicable  
12 to each fuel provider to reduce the av-  
13 erage lifecycle greenhouse gas emis-  
14 sions per unit of energy of the aggre-  
15 gate quantity of transportation fuel  
16 produced, blended, or imported by the  
17 fuel provider to a level that is, to the  
18 maximum extent practicable—

19 “(aa) by not later than cal-  
20 endar year 2011, at least equal  
21 to or less than the fuel emission  
22 baseline;

23 “(bb) by not later than cal-  
24 endar year 2015, 5 percent less

1 than the fuel emission baseline;  
2 and

3 “(cc) by not later than cal-  
4 endar year 2020, 10 percent less  
5 than the fuel emission baseline.

6 “(ii) MAXIMUM REDUCTIONS.—

7 “(I) IN GENERAL.—In deter-  
8 mining the maximum practicable level  
9 of reduction under clause (i)(IV), the  
10 Administrator shall—

11 “(aa) take into consideration  
12 the results of the applicable  
13 study carried out under para-  
14 graph (12); and

15 “(bb) determine whether a  
16 level of reduction—

17 “(AA) is technically in-  
18 feasible; or

19 “(BB) would result in 1  
20 or more adverse lifecycle im-  
21 pacts that cannot be ade-  
22 quately mitigated through  
23 regulatory or nonregulatory  
24 measures under subclause  
25 (II).

1 “(II) MITIGATION.—

2 “(aa) IN GENERAL.—For  
3 the purpose of making a deter-  
4 mination under subclause  
5 (I)(bb)(BB), the Administrator,  
6 in consultation with the heads of  
7 other appropriate Federal agen-  
8 cies, shall use the existing au-  
9 thorities of the Administrator to  
10 mitigate, to the maximum extent  
11 practicable, using regulatory or  
12 nonregulatory approaches as the  
13 Administrator determines to be  
14 appropriate, adverse lifecycle im-  
15 pacts in accordance with a sched-  
16 ule that ensures that mitigation  
17 measures are in place by a date  
18 sufficient to avoid adverse  
19 lifecycle impacts.

20 “(bb) AIR QUALITY IM-  
21 PACTS.—For the purpose of this  
22 subclause, in the case of any air  
23 quality-related adverse lifecycle  
24 impact resulting from emissions  
25 from motor vehicles using renew-

1           able fuel, the Administrator shall  
2           ensure, by regulation promul-  
3           gated under this title, that gaso-  
4           line containing renewable fuel  
5           does not result in—

6                       “(AA) average per-gal-  
7                       lon motor vehicle emissions  
8                       (measured on a mass basis)  
9                       of air pollutants in excess of  
10                      those emissions attributable  
11                      to gasoline sold or intro-  
12                      duced into commerce in the  
13                      United States in calendar  
14                      year 2007; or

15                     “(BB) a violation of  
16                     any motor vehicle emission  
17                     or fuel content limitation  
18                     under any other provision of  
19                     this Act.

20                     “(iii) CALENDAR YEAR 2025 AND  
21                     THEREAFTER.—For calendar year 2025,  
22                     and each fifth calendar year thereafter, the  
23                     Administrator, in consultation with the  
24                     Secretary of Agriculture and the Secretary  
25                     of Energy, shall revise the applicable per-

1           formance standard to require that each  
2           fuel provider shall additionally reduce, to  
3           the maximum extent practicable, the aver-  
4           age lifecycle greenhouse gas emissions per  
5           unit of energy of the aggregate quantity of  
6           transportation fuel introduced by the fuel  
7           provider into commerce in the United  
8           States.

9           “(iv) REVISION OF REGULATIONS.—In  
10          accordance with the purposes of the Ad-  
11          vanced Clean Fuels Act of 2007, the Ad-  
12          ministrator may, as appropriate, revise the  
13          regulations promulgated under clause (i)  
14          as necessary to reflect or respond to  
15          changes in the transportation fuel market  
16          or other relevant circumstances.

17          “(v) METHOD OF CALCULATION.—In  
18          calculating the lifecycle greenhouse gas  
19          emissions of hydrogen or electricity (when  
20          used as a transportation fuel) pursuant to  
21          clause (i)(I), the Administrator shall—

22                  “(I) include emissions resulting  
23                  from the production of the hydrogen  
24                  or electricity; and

1 “(II) consider to be equivalent to  
2 the energy delivered by 1 gallon of  
3 ethanol the energy delivered by—

4 “(aa) 6.4 kilowatt-hours of  
5 electricity;

6 “(bb) 132 standard cubic  
7 feet of hydrogen; or

8 “(cc) 1.25 gallons of liquid  
9 hydrogen.

10 “(C) ELECTION TO PARTICIPATE.—An  
11 electricity provider may elect to participate in  
12 the program under this section if the electricity  
13 provider—

14 “(i) provides and separately tracks  
15 electricity for transportation through a  
16 meter that—

17 “(I) measures the electricity used  
18 for transportation separately from  
19 electricity used for other purposes;  
20 and

21 “(II) allows for load management  
22 and time-of-use rates; and

23 “(ii) generates more than 15 percent  
24 of the electricity sold by the electricity pro-  
25 vider from renewable energy sources.

“(D) CREDITS.—

“(i) IN GENERAL.—The regulations promulgated to carry out this paragraph shall permit fuel providers to receive credits for achieving, during a calendar year, greater reductions in lifecycle greenhouse gas emissions of the fuel produced, blended, or imported by the fuel provider than are required under subparagraph (B)(i)(IV).

“(ii) METHOD OF CALCULATION.—The number of credits received by a fuel provider as described clause (i) for a calendar year shall be calculated by multiplying—

“(I) the aggregate quantity of fuel produced, distributed, or imported by the fuel provider in the calendar year; and

“(II) the difference between—

“(aa) the lifecycle greenhouse gas emissions of that quantity of fuel; and

“(bb) the maximum lifecycle greenhouse gas emissions of that

1 quantity of fuel permitted for the  
 2 calendar year under subpara-  
 3 graph (B)(i)(VI).

4 “(E) COMPLIANCE.—Each fuel provider  
 5 subject to this paragraph shall demonstrate  
 6 compliance with this paragraph, including, as  
 7 necessary, through the use of credits banked or  
 8 purchased.

9 “(F) NO EFFECT ON STATE AUTHORITY  
 10 OR MORE STRINGENT REQUIREMENTS.—Noth-  
 11 ing in this subsection—

12 “(i) affects the authority of a State to  
 13 establish, or to maintain in effect, any  
 14 transportation fuel performance standard  
 15 or other similar standard that is more  
 16 stringent than a standard established  
 17 under this paragraph; or

18 “(ii) supercedes or otherwise affects  
 19 any more stringent requirement under any  
 20 other provision of this Act.”.

21 (b) ADVANCED CLEAN FUEL VOLUME STANDARD.—  
 22 Section 211(o)(2) of the Clean Air Act (42 U.S.C.  
 23 7545(o)(2)) is amended—

24 (1) in subparagraph (B)—

1 (A) by striking the subparagraph designa-  
 2 tion and heading and all that follows through  
 3 “For the purpose” and inserting the following:

4 “(B) APPLICABLE VOLUME.—For the pur-  
 5 pose”; and

6 (B) by striking clauses (ii) through (iv);  
 7 and

8 (2) by adding at the end the following:

9 “(C) ADVANCED CLEAN FUEL VOLUME  
 10 STANDARD.—

11 “(i) DEFINITION OF RENEWABLE  
 12 FUEL.—In this subparagraph, the term  
 13 ‘renewable fuel’ has the meaning given the  
 14 term in paragraph (11).

15 “(ii) INCREASE IN RENEWABLE FUEL  
 16 VOLUME.—

17 “(I) IN GENERAL.—Unless,  
 18 based on the results of the study car-  
 19 ried out under paragraph (12), the  
 20 Administrator determines that the  
 21 total applicable volume of renewable  
 22 fuel specified in clause (iii) for a cal-  
 23 endar year would be technically infea-  
 24 sible, or would result in 1 or more ad-  
 25 verse lifecycle impacts that cannot be

1 adequately mitigated under subclause  
2 (V), the Administrator shall promul-  
3 gate regulations that require the ag-  
4 gregate quantity of transportation fuel  
5 sold or introduced into commerce in  
6 the United States to contain such vol-  
7 ume of renewable fuel as the Adminis-  
8 trator determines will result in the  
9 total minimum volume for the cal-  
10 endar year specified in clause (iii).

11 “(II) INCREASE.—If the Admin-  
12 istrator makes a determination under  
13 subclause (I), the Administrator may  
14 promulgate regulations that require  
15 such increase in the aggregate quan-  
16 tity of transportation fuel sold or in-  
17 troduced into commerce in the United  
18 States as the Administrator deter-  
19 mines to be appropriate, with respect  
20 to the determination under subclause  
21 (I).

22 “(III) SCHEDULE OF REGULA-  
23 TIONS.—In implementing subclauses  
24 (I) and (II), the Administrator shall—

1 “(aa) not later than Janu-  
2 ary 1, 2010, promulgate regula-  
3 tions establishing any total appli-  
4 cable volume requirements for  
5 calendar years 2011 through  
6 2013; and

7 “(bb) not later than Janu-  
8 ary 1, 2013, and every 3 years  
9 thereafter, promulgate regula-  
10 tions establishing any total appli-  
11 cable volume requirements for  
12 the 3-calendar-year period begin-  
13 ning with the calendar year after  
14 the calendar year in which the  
15 regulations are promulgated.

16 “(IV) EFFECTIVE DATE.—The  
17 regulations promulgated under sub-  
18 clauses (I) and (II) shall take effect  
19 not sooner than 1 year after the date  
20 of promulgation of the regulations.

21 “(V) MITIGATION.—

22 “(aa) IN GENERAL.—For  
23 purposes of this clause, the Ad-  
24 ministrator, in consultation with  
25 the heads of other appropriate

1 Federal agencies, shall use the  
2 existing authorities of the Admin-  
3 istrator to mitigate, to the max-  
4 imum extent practicable, using  
5 regulatory or nonregulatory ap-  
6 proaches as the Administrator  
7 determines to be appropriate, ad-  
8 verse lifecycle impacts in accord-  
9 ance with a schedule that ensures  
10 that mitigation measures are in  
11 place by a date sufficient to avoid  
12 adverse lifecycle impacts.

13 “(bb) AIR QUALITY IM-  
14 PACTS.—For the purpose of this  
15 subclause, in the case of any air  
16 quality-related adverse lifecycle  
17 impact resulting from emissions  
18 from motor vehicles using renew-  
19 able fuel, the Administrator shall  
20 ensure, by regulation, that gaso-  
21 line containing renewable fuel  
22 does not result in—

23 “(AA) average per gal-  
24 lon motor vehicle emissions  
25 (measured on a mass basis)

1 of air pollutants in excess of  
2 the quantity of those emis-  
3 sions attributable to gasoline  
4 sold or introduced into com-  
5 merce in the United States  
6 during calendar year 2007;  
7 or

8 “(BB) a violation of  
9 any motor vehicle emission  
10 or fuel content limitation  
11 under any other provision of  
12 this Act.

13 “(iii) TOTAL ADVANCED CLEAN FUEL  
14 VOLUME.—

15 “(I) CALENDAR YEARS 2011  
16 THROUGH 2025.—For the purpose of  
17 clause (ii), the total applicable vol-  
18 umes for any of calendar years 2011  
19 through 2025 (including the minimum  
20 additional volumes required under  
21 subparagraph (B)) shall be deter-  
22 mined in accordance with the fol-  
23 lowing table:

Calendar year	Total applicable volume of renewable fuel (in billions of gallons)	Total volume of phase II renewable fuel (in billions of gallons)	Total volume of phase III renewable fuel (in billions of gallons)
2011 .....	12.0	0	0
2012 .....	14.0	0.5	0.25
2013 .....	16.0	0.5	0.25
2014 .....	18.0	1.5	0.75
2015 .....	20.0	1.5	0.75
2016 .....	22.0	3.0	1.5
2017 .....	24.0	3.0	1.5
2018 .....	26.0	5.0	2.5
2019 .....	28.0	5.0	2.5
2020 .....	30.0	8.0	4.0
2021 .....	31.0	8.0	4.0
2022 .....	32.0	11.0	6.0
2023 .....	33.0	11.0	6.0
2024 .....	34.0	11.0	6.0
2025 .....	35.0	13.0	8.0.

1 “(II) CALENDAR YEAR 2026 AND  
2 THEREAFTER.—Subject to clause (iv),  
3 for the purposes of clause (ii), the  
4 total applicable volume for calendar  
5 year 2026 and each calendar year  
6 thereafter shall be determined by the  
7 Administrator, in consultation with  
8 the Secretary of Agriculture and the  
9 Secretary of Energy, based on a re-  
10 view of the implementation of this  
11 subparagraph and subparagraph (B)  
12 during calendar years 2011 through  
13 2025, including a review of—

1 “(aa) the impact of renew-  
2 able fuel, phase II renewable fuel,  
3 and phase III renewable fuel on  
4 the environment of the United  
5 States and the world; and

6 “(bb) the impact of the use  
7 of renewable fuel, phase II re-  
8 newable fuel, and phase III re-  
9 newable fuel on other factors, in-  
10 cluding job creation, rural eco-  
11 nomic development, domestic en-  
12 ergy production, and the energy  
13 security of the United States.

14 “(III) REVISION OF REGULA-  
15 TIONS.—In accordance with the pur-  
16 poses of the Advanced Clean Fuels  
17 Act of 2007, the Administrator may,  
18 as appropriate, revise the regulations  
19 promulgated pursuant to clause (i) as  
20 the Administrator determines to be  
21 necessary to reflect or respond to—

22 “(aa) changes in the trans-  
23 portation fuel market; or

24 “(bb) other relevant cir-  
25 cumstances.

“(iv) CALCULATION OF TOTAL ADVANCED CLEAN FUEL VOLUME.—For the purpose of clause (iii)(II), the total applicable volume for calendar year 2026 and each calendar year thereafter shall be equal to the product obtained by multiplying—

“(I) the number of gallons of gasoline that the Administrator estimates will be sold or introduced into commerce in the calendar year; and

“(II) the ratio that, as applicable—

“(aa) 35,000,000,000 gallons of renewable fuel (including up to 13,000,000,000 gallons of phase II renewable fuel and up to 8,000,000,000 gallons of phase III renewable fuel); bears to

“(bb) the number of gallons of conventional transportation fuel sold or introduced into commerce in calendar year 2025.

“(v) NO EFFECT ON MORE STRINGENT REQUIREMENTS.—Nothing in this

1                   subparagraph supercedes or otherwise af-  
 2                   fects any more stringent requirement  
 3                   under any other provision of this Act.”.

4           (c) STUDY.—Section 211(o) of the Clean Air Act (42  
 5 U.S.C. 7545(o)) (as amended by subsection (a)) is amend-  
 6 ed by adding at the end the following:

7                   “(12) STUDY ON EFFECTS OF INCREASE IN RE-  
 8           NEWABLE FUEL VOLUME.—

9                   “(A) IN GENERAL.—The Administrator  
 10           shall offer to enter into an agreement with the  
 11           Academy under which the Academy shall peri-  
 12           odically carry out, and submit to Congress and  
 13           the Administrator a report on the results of, a  
 14           study to determine whether the total applicable  
 15           volume of renewable fuel specified in paragraph  
 16           (2)(C)(iii) or the advanced clean fuel perform-  
 17           ance standards specified in paragraph (11)(B)  
 18           for any calendar year would reasonably be an-  
 19           ticipated—

20                   “(i) to result in 1 or more adverse  
 21           lifecycle impacts; or

22                   “(ii) to be technically infeasible.

23                   “(B) SCHEDULE OF STUDIES.—In imple-  
 24           menting subparagraph (A), the Administrator  
 25           shall—

1 “(i) not later than 90 days after the  
 2 date of enactment of this paragraph, offer  
 3 to enter into an agreement with the Acad-  
 4 emy under which the Academy shall con-  
 5 duct the study described in subparagraph  
 6 (A) with respect to calendar years 2011  
 7 through 2013; and

8 “(ii) not later than 3 years after the  
 9 deadline specified in clause (i), and every 3  
 10 years thereafter, offer to enter into an  
 11 agreement with the Academy under which  
 12 the Academy shall conduct the study de-  
 13 scribed in subparagraph (A) with respect  
 14 to the 3-calendar-year period following the  
 15 most recent 3-calendar-year period studied  
 16 by the Academy under this paragraph.

17 “(C) INITIAL STUDY OF ANALYTICAL  
 18 METHODS.—The first study conducted under  
 19 this paragraph shall include an identification  
 20 and development of analytical methods for  
 21 use—

22 “(i) in determining the lifecycle green-  
 23 house gas emissions of conventional trans-  
 24 portation fuel and renewable fuel; and

“(ii) in assessing the impacts of increasing volumes of renewable fuel in the transportation fuel supply on—

“(I) the environment of the United States and the world, taking into consideration potential additional warming of the oceans and surface of Earth as a result of changes in land use and cover; and

“(II) food and feedstock supply and prices.”.

(d) OPT-IN AREAS UNDER REFORMULATED GASOLINE PROGRAM.—Section 211(k)(6)(B) of the Clean Air Act (42 U.S.C. 7545(k)(6)(B)) is amended—

(1) in the subparagraph heading, by striking “OZONE TRANSPORT REGION” and inserting “ADDITIONAL OPT-IN AREAS”; and

(2) in clause (i)(I)—

(A) by striking “in the ozone transport region established by section 184(a)”; and

(B) by striking “(other than an area classified as a marginal, moderate, serious, or severe ozone nonattainment area under subpart 2 of part D of title I)”.

1 **SEC. 5. VOLUNTARY RENEWABLE FUELS LABELING PRO-**  
 2 **GRAM.**

3 Section 211(o) of the Clean Air Act (42 U.S.C.  
 4 7545(o)) (as amended by section 4(c)) is amended by add-  
 5 ing at the end the following:

6 “(13) VOLUNTARY RENEWABLE FUELS LABEL-  
 7 ING PROGRAM.—

8 “(A) DEFINITIONS.—In this paragraph:

9 “(i) PROGRAM.—The term ‘Program’  
 10 means the Voluntary Renewable Fuels La-  
 11 beling Program established under subpara-  
 12 graph (B).

13 “(ii) RENEWABLE FUEL.—The term  
 14 ‘renewable fuel’ has the meaning given the  
 15 term in paragraph (11).

16 “(iii) VOLUNTARY MANAGEMENT  
 17 PRACTICE.—The term ‘voluntary manage-  
 18 ment practice’ means a practice that pro-  
 19 tects the ecological values (including water,  
 20 soil, and biological diversity) of a landscape  
 21 used to produce renewable biomass.

22 “(B) ESTABLISHMENT.—The Adminis-  
 23 trator shall establish a program, to be modeled  
 24 on the Energy Star Program, to promote con-  
 25 sumer awareness of renewable fuels that meet  
 26 the requirements of subparagraph (C).

1           “(C) REQUIREMENTS.—The Program shall  
 2           provide authorization to applicable entities for  
 3           the use of a unique label for any renewable fuel  
 4           that—

5                   “(i) has a lifecycle greenhouse gas  
 6                   emission rate that is at least 50 percent  
 7                   lower than the fuel emission baseline; and

8                   “(ii) complies with applicable vol-  
 9                   untary management practices established  
 10                  under subparagraph (D)(i).

11           “(D) VOLUNTARY MANAGEMENT PRAC-  
 12           TICES, TERMS, AND PROCEDURES.—In carrying  
 13           out the Program, the Administrator shall estab-  
 14           lish—

15                   “(i) voluntary management practices  
 16                   for use in determining the eligibility of a  
 17                   renewable fuel for a unique renewable fuel  
 18                   label under the Program;

19                   “(ii) terms governing the use of a  
 20                   unique renewable fuel label; and

21                   “(iii) procedures for—

22                           “(I) designating a renewable fuel  
 23                           to be eligible for a unique renewable  
 24                           fuel label;

1                   “(II) verifying the values re-  
2                   ported by producers of renewable fuel;  
3                   and

4                   “(III) monitoring compliance  
5                   with the voluntary management prac-  
6                   tices established under clause (i).

7                   “(E) LABEL INFORMATION.—The label to  
8                   be applied to each qualifying renewable fuel  
9                   under the Program shall indicate the lifecycle  
10                  greenhouse gas emission rate of the renewable  
11                  fuel.

12                  “(F) ADVISORY COMMITTEE.—

13                  “(i) ESTABLISHMENT.—The Adminis-  
14                  trator shall establish an independent advi-  
15                  sory committee to assist the Administrator  
16                  in carrying out the Program.

17                  “(ii) DUTIES.—Not less frequently  
18                  than once every 2 years, the advisory com-  
19                  mittee shall provide recommendations to  
20                  the Administrator for updates and im-  
21                  provements to the Program, including rec-  
22                  ommendations relating to the voluntary  
23                  management practices established under  
24                  subparagraph (D)(i).”.

1 **SEC. 6. RESEARCH AND DEVELOPMENT IN SUPPORT OF AD-**  
 2 **VANCED CLEAN FUELS.**

3 Section 211(o) of the Clean Air Act (42 U.S.C.  
 4 7545(o)) (as amended by section 5) is amended by adding  
 5 at the end the following:

6 “(14) RESEARCH AND DEVELOPMENT IN SUP-  
 7 PORT OF ADVANCED CLEAN FUELS.—

8 “(A) PURPOSE.—The purpose of this para-  
 9 graph is to provide for research support to fa-  
 10 cilitate the development of sustainable markets  
 11 and technologies to produce and use woody bio-  
 12 mass and other cellulosic biomass for the pro-  
 13 duction of thermal and electric energy, biofuels,  
 14 and bioproducts.

15 “(B) GRANT PROGRAM.—The Adminis-  
 16 trator shall establish a program to provide to  
 17 eligible entities (as identified by the Adminis-  
 18 trator) grants for use in—

19 “(i) providing financial support for  
 20 not more than 4 nor less than 6 dem-  
 21 onstration facilities that—

22 “(I) use woody biomass to deploy  
 23 advanced technologies for production  
 24 of thermal and electric energy,  
 25 biofuels, and bioproducts; and

1 “(II) are targeted at regional  
2 feedstocks and markets;

3 “(ii) conducting targeted research for  
4 the development of cellulosic ethanol and  
5 other liquid fuels from woody or other cel-  
6 lulosic biomass that may be used in trans-  
7 portation or stationary applications, such  
8 as industrial processes or industrial, com-  
9 mercial, and residential heating;

10 “(iii) conducting research into the  
11 best scientifically-based and periodically-  
12 updated methods of assessing and certi-  
13 fying the impacts of each cellulosic biomass  
14 fuel with respect to—

15 “(I) the reduction in lifecycle  
16 greenhouse gas emissions of each fuel  
17 as compared to—

18 “(aa) the fuel emission base-  
19 line; and

20 “(bb) the greenhouse gas  
21 emissions of other sectors, such  
22 as the agricultural, industrial,  
23 and manufacturing sectors;

24 “(II) the contribution of the cel-  
25 lulosic biomass fuel toward enhancing

1 the energy security of the United  
2 States by displacing imported petro-  
3 leum and petroleum products;

4 “(III) any impacts of the cel-  
5 lulosic biomass fuel on wildlife habi-  
6 tat, biodiversity, water quality, and  
7 air quality; and

8 “(IV) any effect of the cellulosic  
9 biomass fuel with respect to rural and  
10 regional economies;

11 “(iv) conducting research to determine  
12 to what extent the use of cellulosic biomass  
13 fuels in the transportation sector would  
14 impact greenhouse gas emissions in other  
15 sectors, such as the agricultural, industrial,  
16 and manufacturing sectors;

17 “(v) conducting research for the devel-  
18 opment of the supply infrastructure that  
19 may provide renewable biomass feedstocks  
20 in a consistent, predictable, and environ-  
21 mentally-sustainable manner;

22 “(vi) conducting research for the de-  
23 velopment of supply infrastructure that  
24 may provide cellulosic biomass fuels in a

1 consistent, predictable, and environ-  
 2 mentally-sustainable manner; and

3 “(vii) conducting policy research on  
 4 the global movement of cellulosic biomass  
 5 fuels in a consistent, predictable, and envi-  
 6 ronmentally-sustainable manner.

7 “(C) AUTHORIZATION OF APPROPRIA-  
 8 TIONS.—There are authorized to be appro-  
 9 priated to carry out this section—

10 “(i) \$45,000,000 for fiscal year 2009;

11 “(ii) \$50,000,000 for fiscal year 2010;

12 “(iii) \$55,000,000 for fiscal year  
 13 2011;

14 “(iv) \$60,000,000 for fiscal year  
 15 2012; and

16 “(v) \$65,000,000 for fiscal year  
 17 2013.”.

18 **SEC. 7. WATER QUALITY PROTECTION.**

19 Section 211(c)(1) of the Clean Air Act (42 U.S.C.  
 20 7545(c)(1)) is amended—

21 (1) by striking “nonroad vehicle (A) if in the  
 22 judgment of the Administrator” and inserting the  
 23 following: “nonroad vehicle—

24 “(A) if, in the judgment of the Adminis-  
 25 trator, any fuel or fuel additive or”;

1           (2) by striking “, or (B) if” and inserting the  
2     following: “; or  
3           “(B) if”; and  
4           (3) in subparagraph (A), by striking “air pollu-  
5     tion which” and inserting “air pollution or water  
6     pollution (including any degradation in the quality of  
7     groundwater) that”.

○